AMENDMENTS TO THE CLAIMS:

Replace the claims with the following rewritten listing:

1. – 22. (Cancelled)

23. (New) A road surface property detection device for mounting in a vehicle, comprising:

a sensor device having a radiation emitter directed towards the road surface and at least one detector for detecting the radiation reflected from the road surface and providing an output accordingly, and data processing means for processing the output from the at least one detector to determine surface properties of the road and providing an output accordingly;

transmission means for receiving said output from the sensor device and conducting a wireless transmission of road surface property data based thereon to a receiver exterior to the vehicle;

wireless receiver means adapted to receive radio transmissions of data from transmission means of devices similar to the detection device itself; and

data output means for receiving an input from the receiver means and presenting an output perceivable by a driver of the vehicle based thereon.

24. (New) A device according to claim 23, further comprising position means for generating position data for estimation of a current position of the device, wherein the transmission means is arranged to transmit said position data.

25. (New) A device according to claim 23, wherein the data output means is further arranged for receiving an input from the detector means and presenting an output perceivable by the driver of the vehicle based thereon.

26. (New) Sensor device for non-contact detection of conditions of a surface, such as a road surface, the sensor device comprising:

a light source for emitting light towards the surface;

a first detector arranged for receiving a portion of said emitted light when reflected from said surface and producing a first output according to an intensity thereof;

a second detector arranged for receiving a portion of said emitted light when reflected from said surface and for producing a second output according to the intensity thereof; and

control means for receiving and evaluating the received output from the detectors based on an amount of diffuse reflected and mirror reflected light;

wherein the light source is arranged to emit light in a direction within about 20° from the surface normal, the sensor device further comprising:

a first linear polarization filter arranged in a path of the light from the light source and to the surface for the polarization of the emitted light; and

a second linear polarization filter arranged in a path of the light between said surface and one of the first detector and the second detector.

27. (New) Sensor device according to claim 26, wherein the light source is arranged to emit light in a direction within 10° from the surface normal.

28. (New) Sensor device according to claim 26, wherein a direction of polarization of the second filter is parallel to a direction of polarization of the first filter.

29. (New) Sensor device according to claim 28, further comprising a third polarization filter arranged in the path of the light between said surface and the other one of the first detector and the second detector, wherein a direction of polarization of the third filter is perpendicular to the direction of polarization of the first and the second filter.

30. (New) Sensor device according to claim 28, wherein the first and second filter are constituted by one linear polarization filter and a beam splitter is arranged between the first polarization filter and the light source for the diversion of a portion of the light reflected from the surface into said detector.

31. (New) Sensor device according to claim 26, further comprising a first beam splitter arranged in the path of the light from the first linear polarization filter and to the surface for diversion of a portion of the light reflected from the surface into a second path, and a second beam splitter arranged in the second path for diversion of a portion of the light in the second path into the first detector and the transmission of a portion of the light in the second path into the second detector.

32. (New) Sensor device according to claim 26, further comprising a reference light source arranged to emit light substantially in the direction and path of the first light source, wherein the reference light source emits light of a wavelength on which said polarization filters of the device have substantially no effect, so that detection of the light from the reference light source by the first and second detector may be used for verification of a functioning of the system.

33. (New) Sensor device according to claim 26, further comprising a further light source for emitting light within an infrared wavelength range of high absorbance by water towards the surface and an absorption detector for receiving a reflection of said emitted light and producing an output to the control means accordingly.

34. (New) Sensor device according to claim 33, wherein said further light source emits light within the wavelength range of 930 nm to 970 nm.

35. (New) Sensor device according to claim 26, further comprising a light source for emitting light towards the surface, a path of the light having an angle in the range of 15° to 70° to the surface normal and a retro-reflection detector arranged for receiving a retro-

reflection of said emitted light in said path and producing an output to the control means accordingly.

36. (New) Sensor device according to claim 26, further comprising a light source for emitting polychromatic light towards the surface and at least two range detectors arranged to detect each a wavelength range of a reflection of said emitted light and producing an output to the control means accordingly.

37. (New) Sensor device according to claim 36, further comprising at least three of said range detectors arranged for detecting each a wavelength range of the reflection of said emitted light and producing an output to the control means accordingly.

38. (New) Sensor device according to claim 36, wherein said wavelength ranges each comprise a range within the visible wavelength range.

39. (New) Sensor device according to claim 26, wherein the device is mounted in a vehicle, the device further comprising a noise sensor for receiving noise from the vehicle traveling along a road and producing an output to the control means accordingly.

40. (New) A road surface property detection device according to claim 23, wherein the sensor device comprises the device according to claim 26.

41. (New) A road surface property detection device to be mounted on a vehicle for contactless detection of surface properties of a road surface and providing an output accordingly, comprising:

a radiation emitter directed towards the road surface and at least one detector for detecting the radiation reflected from the road surface and providing an output accordingly; and

washing means for the emitter and the at least one detector for recurrently flushing thereof.

42. (New) A device according to claim 41, wherein said washing means is connected to and operates concurrently with a windshield washer system of the vehicle.

43. (New) A road surface property detection device to be mounted on a vehicle for contact-less detection of surface properties of a road surface and providing an output accordingly, comprising:

a radiation emitter directed towards the road surface and at least one detector for detecting the radiation reflected from the road surface and providing an output accordingly; and

at least one detector comprising a shutter device for allowing a temporal access of radiation to the detector for a period of 1/10 to 1/50,000 seconds.

44. (New) Sensor device for non-contact detection of conditions of a surface, such as a road surface, the system comprising:

a light source for emitting light towards the surface;

a first detector arranged for receiving a portion of said emitted light when reflected from said surface and producing a first output according to an intensity thereof;

a second detector arranged for receiving a portion of said emitted light when reflected from said surface and producing a second output according to an intensity thereof; and

control means for receiving and evaluating the received output from the detectors based on an amount of diffuse reflected and mirror reflected light,

one or more arrangements for detecting conditions of the surface, said arrangements comprising at least one of:

an infrared light source for emitting light within a wavelength range of 930 nm to 970 nm towards the surface and an absorption detector for receiving a reflection of said emitted infrared light and producing an output to the control means accordingly, and

a light source for emitting light towards the surface, a path of the light having an angle in a range of 15° to 70° to the surface normal and a retro-

reflection detector arranged for receiving a retro-reflection of said emitted light in said path and producing an output to the control means accordingly,

a light source for emitting polychromatic light towards the surface and at least two range detectors arranged to detect each a wavelength range of a reflection of said emitted light and producing an output to the control means accordingly, and

a noise sensor for receiving noise from a vehicle traveling along a road and producing an output to the control means accordingly, on which vehicle the device is arranged.

45. (New) A system comprising:

a plurality of devices according to claim 23 each mounted in a separate vehicle; and

a plurality of stationary detector means for contact-less detection of surface properties of a road surface and for providing an output accordingly to transmission means for receiving said output and conducting a wireless transmission of road surface property data based thereon to receivers of said devices.

46. (New) A system according to claim 45, comprising a plurality of stationary information arrangements having receiver means adapted to receive radio transmission data from the devices mounted in the vehicles as well as the stationary detector means, and comprising visual communication devices arranged along roads for distributing information to drivers of vehicles on said roads based on said received road surface property data.

47. (New) Sensor device for non-contact detection of conditions of a road surface, the sensor device comprising:

a light source for emitting light towards the surface;

a first detector arranged for receiving a portion of said emitted light when reflected from said surface and producing a first output according to an intensity thereof;

a second detector arranged for receiving a portion of said emitted light when reflected from said surface and producing a second output according to the intensity thereof;

control means for receiving and evaluating the received output from the detectors based on an amount of diffuse reflected and mirror reflected light,

a first linear polarization filter arranged in a path of the light from the light source and to the surface for the polarization of the emitted light;

a second linear polarization filter arranged in a path of the light between said surface and one of the first detector and the second detector; and

a further light source for emitting light within an infrared wavelength range of high absorbance by water towards the surface and an absorption detector for receiving a reflection of said emitted light and producing an output to the control means accordingly.

48. (New) Sensor device according to claim 47, wherein said further light source emits light within the wavelength range of 930 nm to 970 nm.

49. (New) Sensor device according to claim 51, wherein the light source is arranged to emit light in a direction within 20° from the surface normal.